

DRAFT m/1/4/06

QA:N/A

Nevada's Solid Waste Management Plan



Nevada Division of Environmental Protection

Introduction

⇒ Objectives in Updating the State Plan

- Comply with NRS 444.570 that mandates a State solid waste plan and periodic updates
- Assess current conditions and trends
- Identify issues and suggest strategies, such as legislative or regulatory changes to address key issues



Government Roles and Responsibilities

⇒ Municipal Governments

- Develop a plan to provide a solid waste management system to manage and dispose of all solid waste within the municipality.

⇒ Health Districts

- Solid Waste Management Authorities in Clark and Washoe Counties

⇒ State Government

- Solid Waste Management Authority in remaining Counties
- Approved to administer federal municipal landfill regulations
- Statewide planning, review of Health District solid waste programs, enforcement of recycling requirements, public information and education

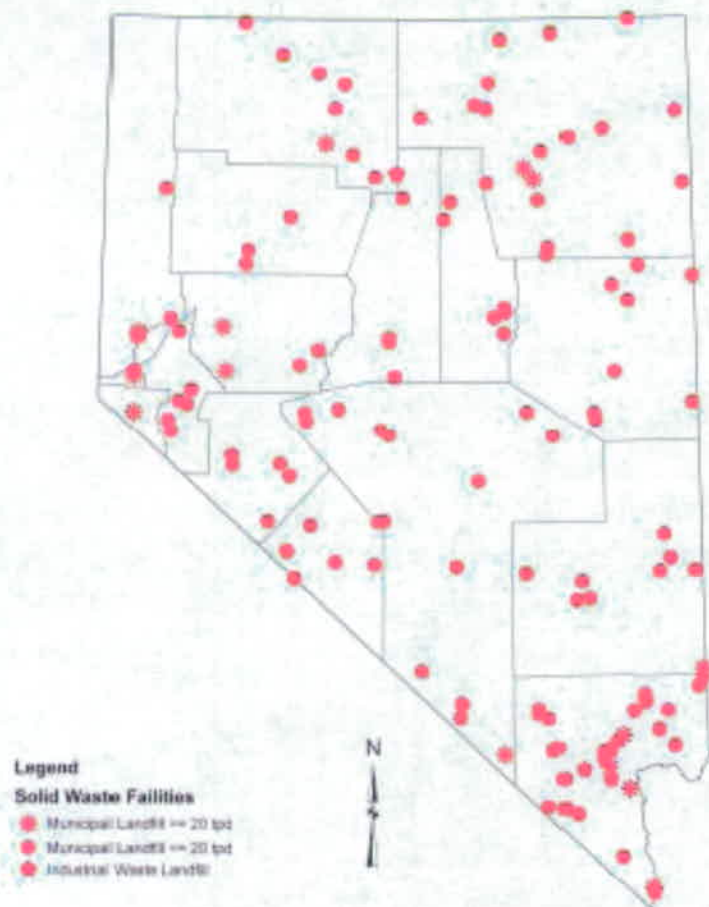
⇒ Tribal Government

- Regulated by EPA, Region IX



Solid waste trends...

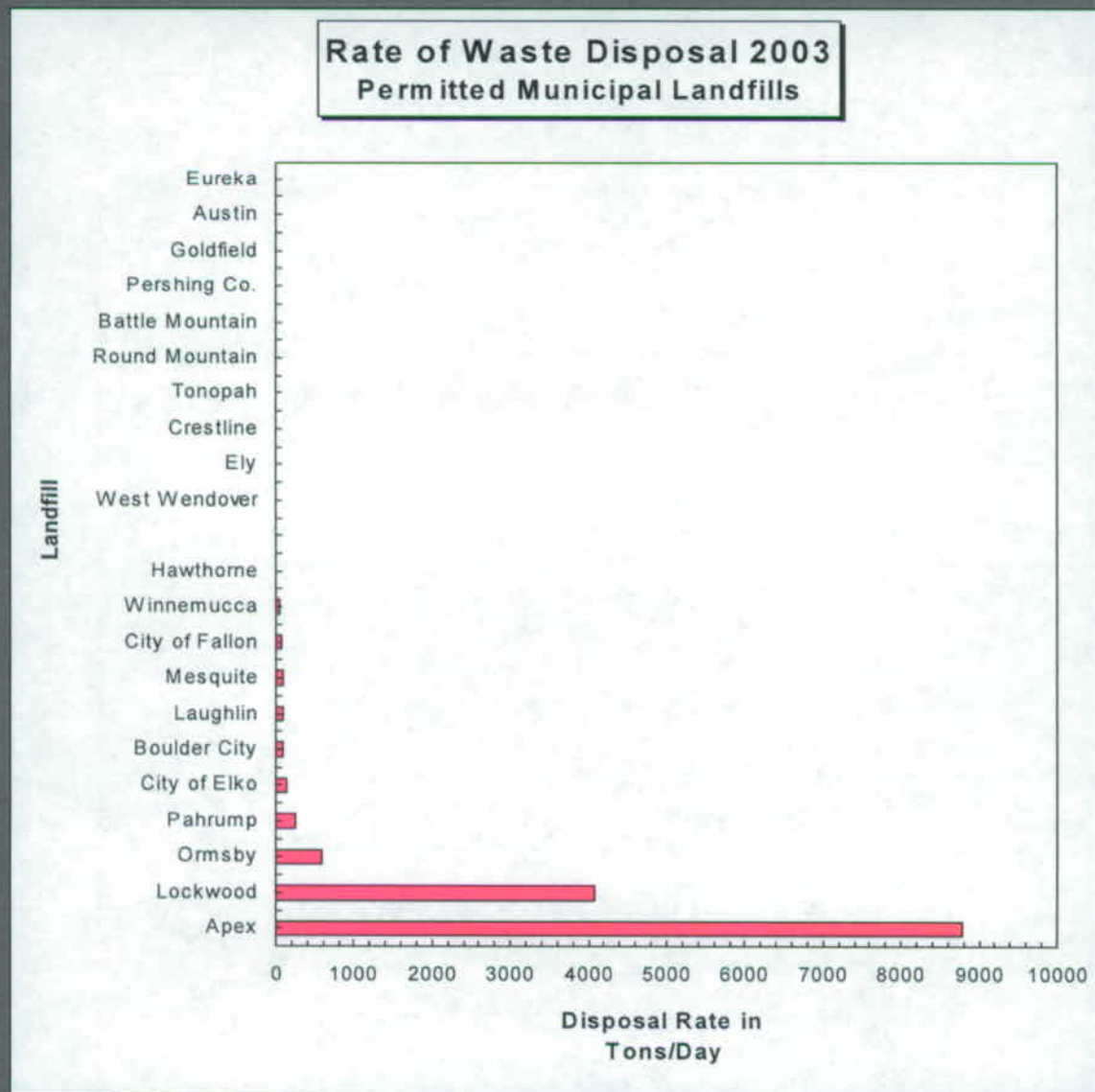
1992 LANDFILLS



2004 LANDFILLS



Solid waste trends...



Collection and infrastructure

- ⇒ Curbside garbage collection offered in most areas
- ⇒ Bi-weekly collection of recyclables at single-family homes in Carson City, Clark, and Washoe
- ⇒ Network of transfer stations and rural public waste bins
- ⇒ Residential collection service cost:
 - \$11 - \$12 in Carson City, Clark and Washoe
 - \$5 - \$19 in rural counties



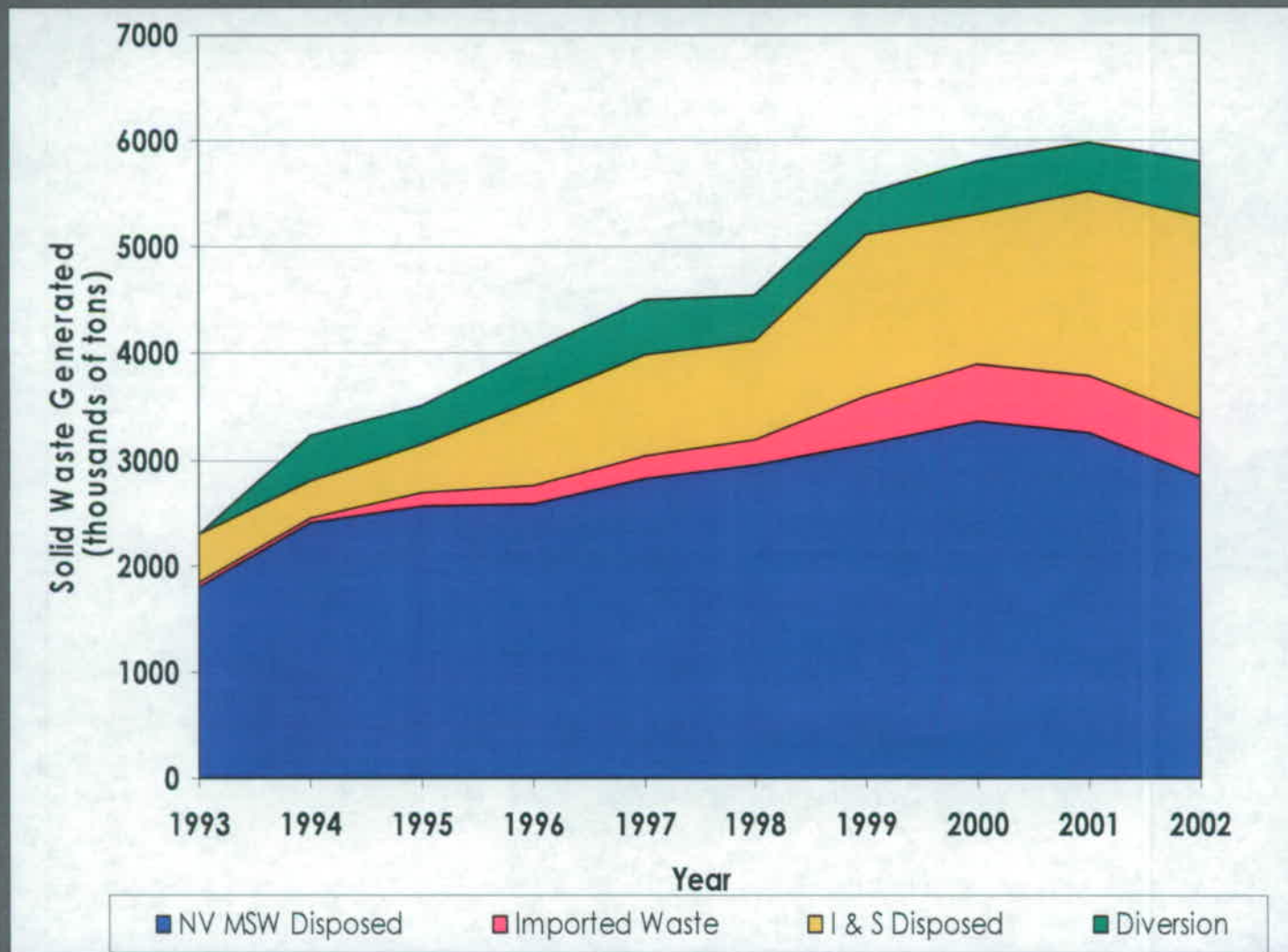
Landfill capacity... not an issue for Nevada as a whole

➡ Estimated years remaining life for large landfills

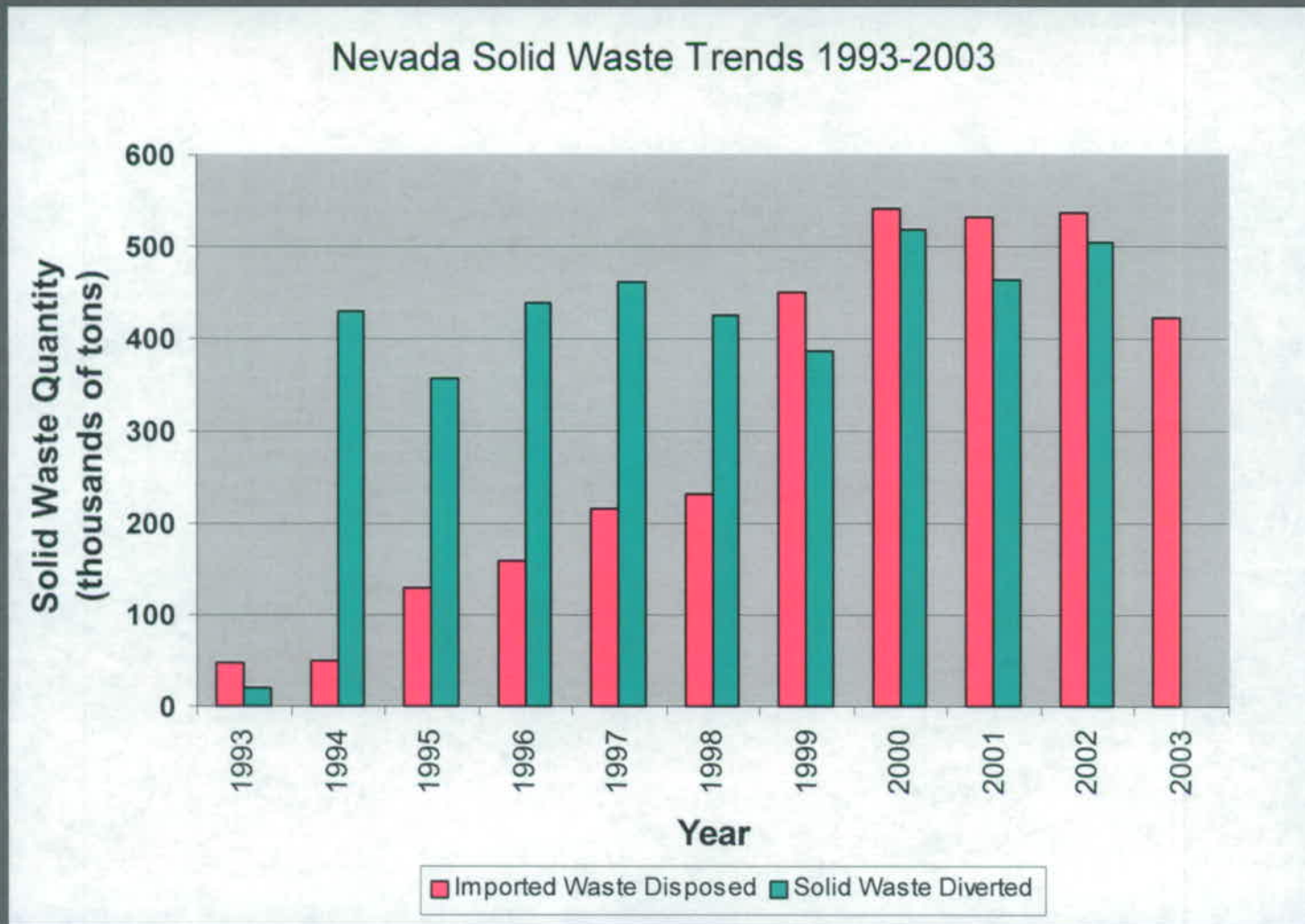
- Apex – 44
- Boulder City – 33
- Carson City – 13
- Elko – 19
- Laughlin – 16
- Lockwood – 32
- Pahrump - 5



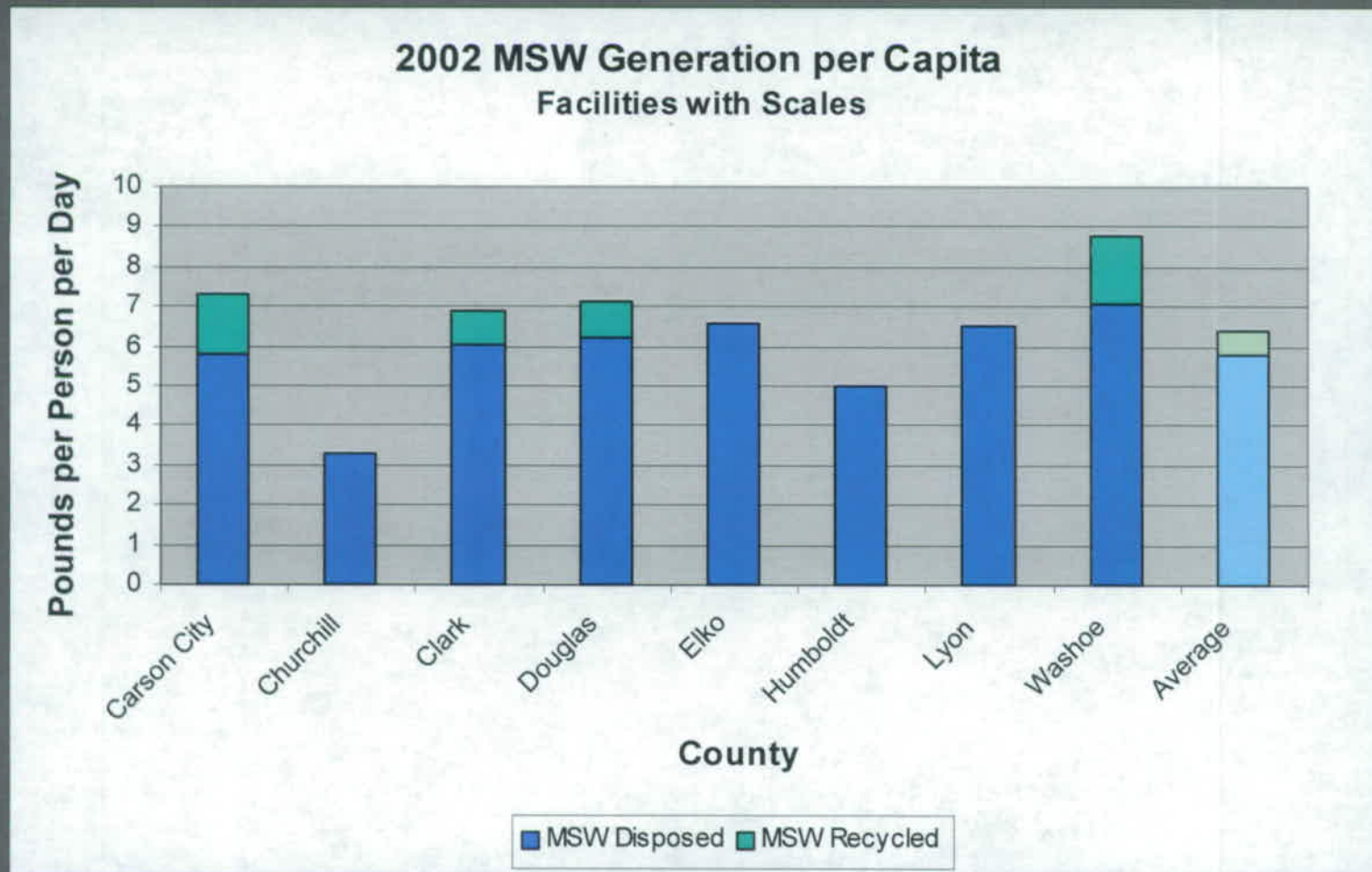
Waste generation and recycling



Solid waste trends...comparison of imported vs. recycled amounts



Generation and diversion



Assessment of Municipal Solid Waste Management Systems

- ➔ Map and atlas for each County
 - Map shows infrastructure for year 2004
 - Atlas provides information on:
 - Local solid waste planning authority
 - Population and solid waste trends (1993 – 2003)
 - Active municipal waste landfills
 - Solid waste and recyclables collection services
 - Recycling drop-off sites
 - Household hazardous waste collection services



Map and Atlas for Clark County

State Solid Waste Management Plan



Clark County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Clark County Health District
Plan Date: April 27, 1999

POPULATION AND SOLID WASTE TRENDS:

	1993	1996	1997	1999	2001	2003
Population	949,827	1,055,455	1,195,388	1,227,445	1,485,895	1,628,748
Municipal waste generated	1,227,750	1,369,895	2,047,323	2,025,035	2,386,151	2,825,863
Industrial/sector waste disposed	215,389	340,890	528,532	894,586	1,182,084	1,448,517
Industrial waste disposed	0	0	0	0	0	0
Recycling rate	50%	12%	13%	8%	21%	50%
SWM generated (per day)	3.34	3.71	4.80	5.61	6.56	7.73

Notes: Data is not as reported to SWM; recycling rate = ARW/Generated; SWM generated; population from US Dept. of Commerce

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Estimated Closes	Transfer Station	Closures
Agnes Landfill	Republic Services	1.01	8/79	2/87
Boyd City Landfill	US 91 M. Boyd City Disposal	1	98	2006
Langdon Landfill	US 91 M. Republic Services	1	98	2009
Walla Carga	Walla Carga	01	025	30/5

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Transfer	Excludes	Mandatory Recycling	Collection Frequency	Curbside Recycling
Clark County	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
North Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Henderson	Republic Services	Yes	Yes	semi-weekly	bi-weekly
North Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Langdon	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Mesa	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Mesa	Republic Services	Yes	Yes	semi-weekly	bi-weekly

NUMBER OF RESIDENTIAL RECYCLING DROP-OFF SITES:

Office	Cardboard	Newspapers	Aluminum	Plastics	Yard	Food	Sites that accept 3 or more different types of materials
Agnes	15	8	10	2	2	0	1

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Republic Services	Drop-off: Free at all recycling centers. Quarterly events at 3 transfer stations in Henderson, Langdon & Mesa. Drop-off: Free at all landfills.	Used Oil, Paint, Pesticides, etc.
Boyd City		

Solid Waste Management Issues and Strategies

⇒ An objective of the plan is to identify current and future issues and suggest strategies to address them.

- Landfills
- Recycling
- Importation
- Special Waste Management
- Rural Waste Management
- Open dumping and open burning
- State and local funding



Landfills

⇒ Issues

- Liner requirements for large scale landfills
 - Proposed large-scale landfills without liners raise concern about containment of landfill leachate and gas.
- Bioreactor landfills (R&D permit)
 - Do they make sense in Nevada?
- Postclosure care period
 - Is 30-years long enough?
- Final cover
 - Is the conventional clay cover acceptable? How to promote alternative designs?
- Landfill gas
 - Landfill gas management may deserve more attention in the design, operation and closure of NV landfills.



Landfills

⇒ Suggested strategies

- Liner requirements
 - Consider a threshold above which an engineered liner will be required.
- Bioreactor landfills (RD&D permit)
 - Do not seek authority to issue RD&D permits unless needed.
- Postclosure care period
 - Consider requiring postclosure care as long as the buried waste remains a potential source of groundwater contamination.
- Final cover
 - Develop guidance or regs to promote the use of alternative final covers.
- Landfill gas
 - Evaluate the conditions of gas generation at Nevada landfills.



Recycling

⇒ Issues

- Nevada has failed to meet it's 25% goal
- Clark County low recycle rate profoundly impacts the statewide rate
- Barriers to recycling in Clark County
 - County does not have a recycling coordinator
 - Limited recycling opportunities at apartments
 - No coordinated effort in the commercial sector
- Public buildings present opportunities to increase recycling



Recycling

⇒ Suggested strategies

- Improve information available to businesses on waste reduction and local recycling by adding provisions to the duties of counties with recycling programs
- Improve recycling coordination and public information by establishing a recycling coordinator at the local level
- Establish an NDEP recycling coordinator position in Las Vegas
- Coordinate with local government and franchisee in Clark County to promote expansion of recycling opportunities
- Investigate the benefits and feasibility of a State “bottle bill”



Importation

⇒ Issues

- NV positioned to become major waste importing state
- The solid waste management account is funded entirely by Nevada residents and businesses through the tire fee - States that export waste to Nevada do not contribute to the cost of regulation.

⇒ Suggested strategy

- Establish permit fee & composite liner requirements for disposal sites that exceed a disposal rate or capacity threshold.



Special Waste

⇒ Issues

- Waste tires – tire recycling markets have not developed in Nevada, therefore, most tires are landfilled
- HHW – drop-off service is provided in communities >40,000 however, rural Nevada does not have comprehensive HHW programs.
- Infectious waste – services for home-generated medical waste, such as “sharps,” are not prevalent.
- Electronic waste – some fail the toxicity test and require special management. The electronic waste issue is not unique to Nevada.



Special Waste

⇒ Suggested strategies

- Re-evaluate tire landfilling and investigate the potential for tire-derived fuel and recycling markets.
- Provide HHW startup funding to rural local governments that are willing to cover program maintenance.
- Promote development of collection programs for sharps. Provide information on mail-in programs.
- Municipalities should inform local electronic waste generators of the available recycling and disposal options



Rural Waste, open dumping and open burning

➔ Issues

- Rural waste – Demands for increased rural waste infrastructure and technical operations and planning place an economic burden on the County.
- Open dumping – Remains a problem in many areas of Nevada
- Open burning – Is not only a public nuisance, but is also a threat to public health and the environment due to the emission of persistent bioaccumulative toxins (PBT) toxic substances (e.g. dioxins)



Rural Waste, open dumping and open burning

⇒ Suggested strategies

- Establish a state landfill manager/operator certification program.
- Establish a grants program to help rural governments to improve their solid waste management system.
- Assist rural government officials and staff that want to address illegal dumping.
- Some local governments should consider adoption of a “generator responsibility” ordinance.



State and local funding

⇒ Issues

- In some counties, budget shortages have led to failure to provide adequate staff, training, equipment and operation funds.
- Funding solid waste management regulation is provided primarily through the \$1 fee per tire in Nevada.
- NDEP receives 44.5% of the tire fee, with Clark and Washoe County health districts receiving the remainder.
- The revenue trend from the tire fee has decreased from \$0.32/ton disposed in 1994 to \$0.21/ton disposed in 2003 (adjusted for inflation).



State and local funding

⇒ Suggested strategies

- Evaluate funding sources and the need for financial assistance to rural local governments.
- Seek statutory revisions to allow NDEP to award grants to rural local governments for improvement of the local solid waste management system
- Establish permit fees for disposal sites that exceed a permitted disposal rate or capacity threshold.
- Investigate the benefits and feasibility of adoption of a State “bottle bill”.



State solid waste plan...next steps

- ⇒ August 27, 2004 – public comment period ended
 - Accepted written and email comments on draft plan.
- ⇒ Sept to Dec 2004 – prepare and post final draft
 - Petition State Environmental Commission to adopt plan
 - 30-day public comment period on final draft



Conclusion

- ⇒ Keep state and municipal solid waste plans up to date!
- ⇒ Check NDEP website for updates on Nevada SWMP development: www.ndep.nv.gov
- ⇒ Submit written comments on State SWMP to:

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Carson City, NV 89706-0851

or email/phone:

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Nevada Division of Environmental
Protection





State of Nevada
Division of Environmental Protection
Bureau of Waste Management



Solid Waste Power Point Presentations

- ▶ [Draft Solid Waste Management Plan](#) (Adobe file 316 KB)
 - ▶ [NDEP Illegal Dumping](#) (Adobe file 728 KB)
 - ▶ [What Your Landfill Permit Permits. . . and how to comply with it](#) (Adobe file 495 KB)
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